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DICTIONARY FILE UPDATES:  22 MAR 2009  HIGHEST RN 1125392-64-4

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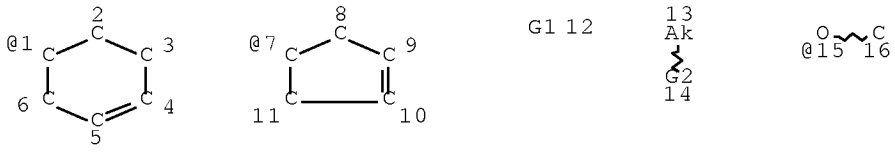


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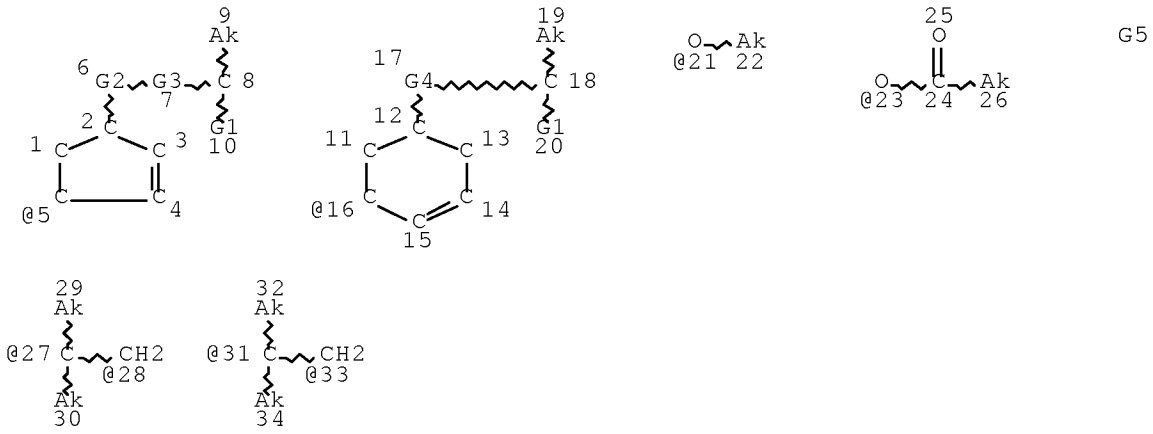

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STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 41607 ITERATIONS 362 ANSWERS
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L8          135 S L6 AND L7
L9              QUE LEWIS(N)ACID?
L10           5 S L8 AND L9

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L13          16 S L12 AND 1-CHLORO

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     FILE 'REGISTRY' ENTERED AT 13:58:20 ON 24 MAR 2009
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L18           5 S L11 AND PENTENE


=> fil hcap
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FILE COVERS 1907 - 24 Mar 2009  VOL 150 ISS 13
FILE LAST UPDATED: 23 Mar 2009  (20090323/ED)

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reclassification data for the third quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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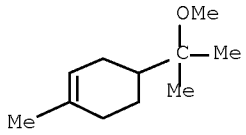
L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:809821 HCAPLUS Full-text
DOCUMENT NUMBER: 147:322406
TITLE: Hydroalkoxylation of non-activated olefins catalyzed by Lewis superacids in alcoholic solvents: an eco-friendly reaction
AUTHOR(S): Lemechko, Pierre; Grau, Fanny; Antoniotti, Sylvain; Dunach, Elisabet
CORPORATE SOURCE: LCMBA UMR 6001, Institut de Chimie de Nice, Universite de Nice-Sophia Antipolis, CNRS, Nice, F-06108, Fr.
SOURCE: Tetrahedron Letters (2007), 48(33), 5731-5734
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:322406

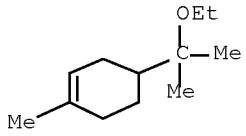
AB Lewis superacids such as tin(IV) triflate catalyze the intermol. addition of primary alcs. to non-activated olefins under mild conditions.

IT 14576-08-0P 27153-54-4P 27153-57-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(hydroalkoxylation of non-activated olefins catalyzed by Lewis superacids in alc. solution)

RN 14576-08-0 HCAPLUS
CN Cyclohexene, 4-(1-methoxy-1-methylethyl)-1-methyl- (CA INDEX NAME)

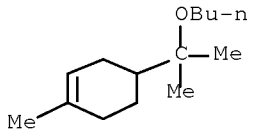


RN 27153-54-4 HCAPLUS
CN Cyclohexene, 4-(1-ethoxy-1-methylethyl)-1-methyl- (CA INDEX NAME)



RN 27153-57-7 HCAPLUS

CN Cyclohexene, 4-(1-butoxy-1-methylethyl)-1-methyl- (CA INDEX NAME)



CC 21-2 (General Organic Chemistry)
Section cross-reference(s): 30
ST olefin hydroalkoxylation Lewis superacid catalyst alc soln; ether prepn
IT Addition reaction
Addition reaction catalysts
Alkoxylation
Green chemistry
(hydroalkoxylation of non-activated olefins catalyzed by Lewis superacids in alc. solution)
IT Lewis acids
Superacids
RL: CAT (Catalyst use); USES (Uses)
(hydroalkoxylation of non-activated olefins catalyzed by Lewis superacids in alc. solution)
IT 14576-08-0P 27153-54-4P 27153-57-7P
38376-28-2P 53767-86-5P 58195-90-7P 94281-60-4P 947701-74-8P
947701-75-9P 947701-76-0P 947701-77-1P 947701-78-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(hydroalkoxylation of non-activated olefins catalyzed by Lewis superacids in alc. solution)
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:233179 HCAPLUS Full-text
DOCUMENT NUMBER: 146:521952
TITLE: An improved process for the preparation of the terpineol esters
INVENTOR(S): Sethi, Vijay Kumar; Singh, Samar; Dhar, Piary Lal; Taneja, Subhash Chandra; Thappa, Rajinder Kumar; Handa, Sukhdev Swami
PATENT ASSIGNEE(S): Council of Scientific and Industrial Research, India
SOURCE: Indian Pat. Appl., 13pp.
CODEN: INXXBQ
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 2000DE00663	A	20050805	IN 2000-DE663	200007 18

PRIORITY APPLN. INFO.: IN 2000-DE663

200007
18

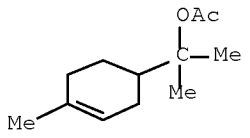
OTHER SOURCE(S): CASREACT 146:521952

AB The present invention relates to an improved process for the preparation of terpineol esters. In the process terpinyl esters is prepared from pinenes (α- and β-pinenes) in a single step. The process gives only one isomer in major amts. i.e. α-terpinyl esters (50-55%) or other esters whereas the other isomers, β-& γ-terpineol esters are formed only in 3.0-7.0% yield. The method involves the treatment for pinenes in an inert solvent with an acetylating agent containing a catalyst selected from the salts of group VIII, IIIA, II B or IB elements under low temperature conditions with vigorous agitation for a given time, separating the resulting reaction product by conventional methods and then separating the terpineols esters by fractionation.

IT 80-26-2P, α-Terpinyl acetate 80-27-3P, α-Terpinyl propionate 2153-28-8P, α-Terpinyl butyrate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(improved process for the preparation of the terpineol esters from pinene)

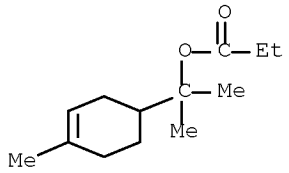
RN 80-26-2 HCAPLUS

CN 3-Cyclohexene-1-methanol, α,α,4-trimethyl-, 1-acetate (CA INDEX NAME)



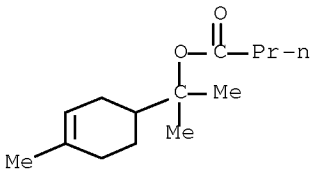
RN 80-27-3 HCAPLUS

CN 3-Cyclohexene-1-methanol, α,α,4-trimethyl-, 1-propanoate (CA INDEX NAME)



RN 2153-28-8 HCAPLUS

CN Butanoic acid, 1-methyl-1-(4-methyl-3-cyclohexen-1-yl)ethyl ester (CA INDEX NAME)



IC ICM C07C009-00
CC 30-10 (Terpenes and Terpenoids)
Section cross-reference(s): 62, 67
IT Substitution reaction catalysts
(acyloxylation catalysts; improved process for the preparation of the terpineol esters from pinene)
IT Lewis acids
RL: CAT (Catalyst use); USES (Uses)
(acyloxylation catalysts; improved process for the preparation of the terpineol esters from pinene)
IT Acids, uses
RL: CAT (Catalyst use); USES (Uses)
(inorg., acyloxylation catalysts; improved process for the preparation of the terpineol esters from pinene)
IT 7446-70-0, Aluminum chloride, uses 7447-39-4, Copper(II) chloride, uses 7487-94-7, Mercuric chloride, uses 7637-07-2, Boron trifluoride, uses 7646-85-7, Zinc chloride, uses 7664-38-2, Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses 7705-08-0, Ferric chloride, uses 7720-78-7, Iron(II) sulfate 10043-35-3, Boric acid (H3BO3), uses
RL: CAT (Catalyst use); USES (Uses)
(acyloxylation catalyst; improved process for the preparation of the terpineol esters from pinene)
IT 80-26-2P, α-Terpinyl acetate 80-27-3P, α-Terpinyl propionate 2153-26-6P, α-Terpinyl formate 2153-28-8P, α-Terpinyl butyrate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(improved process for the preparation of the terpineol esters from pinene)

L10 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:375712 HCAPLUS Full-text
DOCUMENT NUMBER: 129:161726
ORIGINAL REFERENCE NO.: 129:32915a,32918a
TITLE: Palladium/tin catalyzed alkoxycarbonylation of naturally occurring bicyclic monoterpenes
AUTHOR(S): da Rocha, Lilian L.; Dias, Adelson de. O.; dos Santos, Eduardo N.; Augusti, Rodinei; Gusevskaya, Elena
CORPORATE SOURCE: Departamento de Quimica-ICEx, Universidade Federal de Minas Gerais, Belo Horizonte, 31270-901, Brazil
SOURCE: Journal of Molecular Catalysis A: Chemical (1998), 132(2-3), 213-221
CODEN: JMCCF2; ISSN: 1381-1169
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

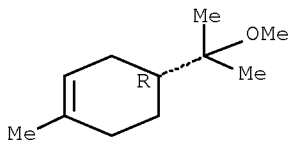
AB The alkoxycarbonylation of camphene and β-pinene has been studied. The following systems have been used as catalysts : PdCl2(PPh3)2/SnCl2/PPh3 and PdCl2(diphosphine)/SnCl2/PPh3 whose diphosphines were 1,2-bis(diphenylphosphino)ethane, 1,3-bis(diphenylphosphino)propane and 1,4-bis(diphenylphosphino)butane. It was observed that several concurrent transformations of monoterpenes occur in the reaction solns. To find the optimum conditions for alkoxycarbonylation the effect of the reaction variables on the product distribution has been investigated. The reaction of β-pinene exclusively yields the products of the Lewis acid catalyzed skeletal rearrangement accompanied by a nucleophilic addition of chloride and methoxy groups. No products of carbon monoxide incorporation were observed Camphene was converted to the corresponding linear ester composed of approx. equal amts. of exo and endo isomers with a selectivity of 90% and virtually 100% regioselectivity (linear/branched esters) using a PdCl2(PPh3)2/SnCl2/PPh3 system as a catalyst. Me bornyl ether was the only major byproduct. SnCl2 and PdCl2(PPh3)2 exhibited a strong synergetic effect on the camphene alkoxycarbonylation. PdCl2(PPh3)2 alone showed a very low catalytic activity promoting the predominant formation of the thermodynamically more stable exo isomer (the exo/endo ratio is approx. 2:1).

IT 30199-25-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(palladium/tin catalyzed alkoxycarbonylation of naturally occurring bicyclic monoterpenes)

RN 30199-25-8 HCAPLUS

CN Cyclohexene, 4-(1-methoxy-1-methylethyl)-1-methyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



CC 30-10 (Terpenes and Terpenoids)

IT Alkoxycarbonylation
Alkoxycarbonylation catalysts
(palladium/tin catalyzed alkoxycarbonylation of naturally occurring bicyclic monoterpenes)

IT 99-85-4P 586-62-9P 4443-51-0P 5989-27-5P, (R)-(+)-Limonene 6120-13-4P 7785-26-4P 30199-25-8P 90976-73-1P 211237-72-8P 211237-79-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(palladium/tin catalyzed alkoxycarbonylation of naturally occurring bicyclic monoterpenes)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:934321 HCAPLUS Full-text
DOCUMENT NUMBER: 124:56323
ORIGINAL REFERENCE NO.: 124:10661a,10664a
TITLE: PLS versus zeolites as sorbents and catalysts II. Terpene conversions in alumina-pillared clays and phosphates and medium

pore zeolites

AUTHOR(S): Stefanis, Adriana De; Perez, Giorgio; Ursini, Ornella; Tomlinson, Anthony A. G.

CORPORATE SOURCE: Istituto di Cromatografia, Area della Ricerca di Roma del C.N.R., C.P. 10 Monterotondo Staz., Rome, 00016, Italy

SOURCE: Applied Catalysis, A: General (1995), 132(2), 353-65
CODEN: ACAGE4; ISSN: 0926-860X

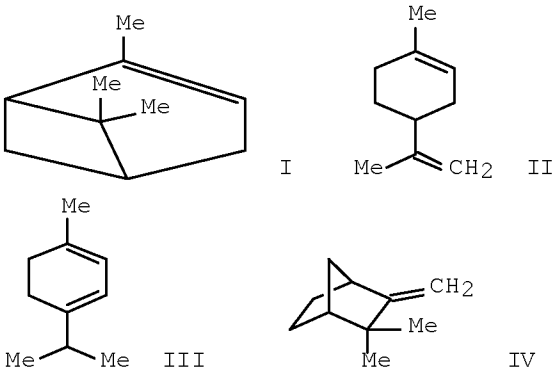
PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 124:56323

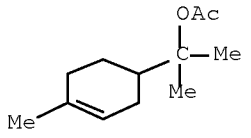
GI



AB The reactions of α-pinene (I), limonene (II), and α-terpinene (III) in several alumina-pillared clays (PILCs) and a layered α-tin phosphate analog (Al-PILP) have been investigated under Lewis acid conditions and compared with the mid-pore zeolites USY, NH+4-ZSM-5 (with SiO2/Al2O3 ratios = 35 and 235), and H+-mordenite. The bicyclic α-pinene gives the highest conversion, all catalysts giving >50% camphene (IV)at 100°C. Total yields show that USY is the strongest acid, after which the acidity order is: BP-PILC = ZSM-5 (35) > FAZA > H+-mordenite, and the layered phosphate appears to be less acid than the PILCs. No fenchane carbocation-derived products are produced, indicating that all the solids promote formation of the norbornyl cation intermediate. Selectivities in the unsubstituted PILCs is comparable with those in the zeolites (e.g. both FAZA and USY show selectivity against limonene production in the α-pinene reaction). BP-PILC also shows appreciable activity for α-pinene at 25°C (as does USY) whereas Al-PILP is inactive. Specific carbocation precursors are deduced from the product distributions and a 'carbocation cascade' based on pore acidity provides a rationalization of the results. However, site-selectivity effects do come into play in K+- and Ca2+-PILCs and it also appears that limonene occupies a specific site in USY. The reactions provide a means of generating terpene derived carbocations in the solid state.

IT 80-26-2P, α-Terpinyl acetate
RL: SPN (Synthetic preparation); PREP (Preparation)
(terpene conversions in alumina-pillared clays, phosphates, and medium pore zeolites)

RN 80-26-2 HCAPLUS
CN 3-Cyclohexene-1-methanol, α,α,4-trimethyl-, 1-acetate (CA INDEX NAME)



CC 30-10 (Terpenes and Terpenoids)
ST terpene rearrangement clay zeolite catalyst; mordenite zeolite sorbent terpene rearrangement; alumina pillared clay catalyst terpene rearrangement; camphene prepn terpene rearrangement; pinene alpha conversion zeolite catalyst; limonene conversion clay zeolite catalyst; terpinene alpha conversion zeolite catalyst
IT Rearrangement
Rearrangement catalysts
Regiochemistry
(terpene conversions in alumina-pillared clays, phosphates, and medium pore zeolites)
IT 76-49-3P, Bornyl acetate 79-92-5P, Camphene 80-26-2P, α-Terpinyl acetate 99-85-4P, γ-Terpinene 99-87-6P, p-Cymene 586-62-9P, Terpinolene 586-63-0P, Isoterpinolene
RL: SPN (Synthetic preparation); PREP (Preparation)
(terpene conversions in alumina-pillared clays, phosphates, and medium pore zeolites)

L10 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1994:533566 HCAPLUS Full-text
DOCUMENT NUMBER: 121:133566
ORIGINAL REFERENCE NO.: 121:24137a,24140a
TITLE: Cycloadditions. 44. 2,3-Donor-acceptor-substituted 1,3-butadienes. Synthesis by SO2-extrusion from 3-sulfolenes and Diels-Alder reactions
AUTHOR(S): Hoffmann, Ralf; Mattay, Jochen; Banning, Anja; Rodewald, Ute; Moeller, Manfred M.
CORPORATE SOURCE: Org. Chem. Inst., Univ. Muenster, Muenster, Germany
SOURCE: Journal fuer Praktische Chemie/Chemiker-Zeitung (1994), 336(4), 343-9
CODEN: JPCCEM; ISSN: 0941-1216
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 121:133566
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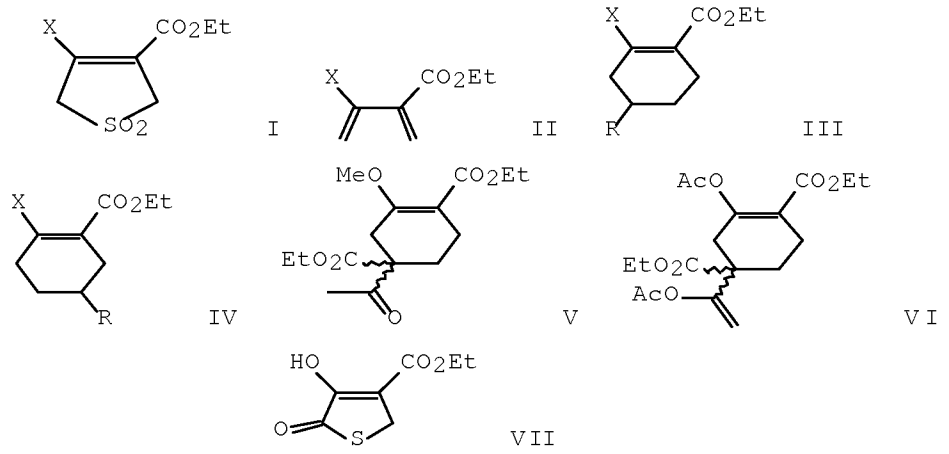
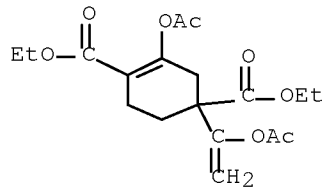


AB The thermal extrusion of SO2 from disubstituted 3-sulfolenes I (X = OMe, OAc) leads to 2,3-donor-acceptor-substituted 1,3-butadienes II. These dienes react with acrylic acid ester and Et vinyl ether to the corresponding Diels-Alder adducts III and IV (R = CO2Et, OEt) and with themselves to the cyclic dimerization products V and VI. The regiochem. of the cycloadducts has been determined by chemical- and NMR-methods. The pyrolysis of 3-sulfolene I (X = OH) afforded the thiolactone VII whose structure has been verified by x-ray diffraction anal. In addition, the influence of Lewis acid catalysts on the Diels-Alder reaction and an approach to transition state calcn. by means of the semiempirical AM 1 method has also been investigated.

IT 157163-35-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 157163-35-4 HCAPLUS

CN 1-Cyclohexene-1,4-dicarboxylic acid, 2-(acetyloxy)-4-[1-(acetyloxy)ethenyl]-, 1,4-diethyl ester (CA INDEX NAME)



CC 24-5 (Alicyclic Compounds)
Section cross-reference(s): 75

ST donor acceptor butadiene Diels Alder regiochem; sulfolene conversion donor acceptor butadiene; Lewis acid Diels Alder catalyst; transition state Diels Alder; thiolactone

IT Diels-Alder reaction catalysts
(Lewis acids, inducing self-Diels-Alder reaction of 2,3-donor-acceptor-substituted 1,3-butadienes)

IT Lewis acids
RL: RCT (Reactant); RACT (Reactant or reagent)

(catalysts inducing self-Diels-Alder reaction of 2,3-donor-acceptor-substituted 1,3-butadienes)

IT 7446-70-0, Aluminum chloride, uses 7550-45-0, Titanium tetrachloride, uses 7646-85-7, Zinc chloride (ZnCl2), uses
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for self-Diels-Alder reaction of donor-acceptor dienes)

IT 16205-98-4P, 3-Oxocyclohexanecarboxylic acid 95992-17-9P 157163-29-6P 157163-30-9P 157163-31-0P 157163-32-1P 157163-33-2P 157163-34-3P 157163-35-4P 157163-36-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

=>